SHATILOV, A. P.

Industrial testing of new drilling rigs for open-pit mining.
Gor. zhur. no.11:46-51 N '62. (MIRA 15:10)

1. Glavnyy spetsialist Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu.

(Boring machinery--Testing)

SHATILOV, Aleksandr Petrovich; GORODENSKIY, L.N., red.

[Overall mechanization of strip mining operations in the U.S.S.R.; material to aid lecturers] Kompleksnaia mekhanizatsiia otkrytykh gornykh rabot v SSSR; material v pomoshch' lektoru. Moskva, Ob-vo "Znanie," RSFSR, 1963. 47 p. (MIRA 17:10)

SHATILOV, A.P., gornyy inzh.

Results of industrial tests of three-roller pin bits. Gor. zhur. no.9:28-30 S '63. (MIRA 16:10)

[redacted]; [redacted]; [redacted]; SHALIGIN, A.E. (Moscow)

"Shock-tube investigation of the density behind the reflected shock wave".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

L 20818-65 EWT(l)/EWP(m)/EWG(v)/FCS(k)/EWA(h)/EWA(l) Pd-1/Pe-5/Pl-4 SSD(b)/
AEDC(t)/SSD/AFWL/AEDC(a)/BSD/ASD(f)-3/ASD(p)-3/AFETR/RAEM(a)/ESD(gs)/ MLK
ACCESSION NR: AT4048013 S/0000/64/000/000/0104/0114

AUTHOR: Zaytsev, S.G., Shatilov, A.P., Lazareva, Ye. V., Trukhanova, L.N., Averina, L.A., Yaichkov, M.K.

TITLE: Methods for measuring the density field of gas flow in a shock tube with the aid of an interferometer

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodinamika i svoystva gazov pri vy*sokikh temperaturakh (Physical gas dynamics and properties of gases at high temperatures). Moscow, Izd-vo Nauka, 1964, 104-114

TOPIC TAGS: gas dynamics, gas density measurement, shock wave, shock tube, interferometry, nitrogen shock wave

ABSTRACT: The paper deals with techniques for interferometric studies of shock waves in a tube. The lengths of the high and low pressure tubes are 0.9 and 3.4 m, respectively, the internal cross section is 72 x 72 mm, and the side-walls of the end-section are made of accurately (0.2 band over the entire field) plane-parallel glass. A description of the electronic details for recording, synchronization, etc. is then given. A Mach-Zehnder interferometer was used. The 'white' light source provided a light-pulse of 1 μsec effective length, by point and line-discharges of a capacitor charge to 10 kV. The scanning

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L 20818-65
ACCESSION NR: AT4048013

method allowed continuous density measurement at a fixed plan with spatial resolution of 1-1.5 mm and time resolution of 2-3 μsec. The electronic recording system for framing photography is also described, using an image-converter type PIM-3 made in the laboratory of M. M. Butslov, so that the high-speed processes could be recorded on a fixed film. The shift of bands could be measured on a microscope with an accuracy of less than 0.1 of a band, and the maximum and minimum blackening were measured with an MF-2 microphotometer. The method of calibration is described and the total error in density determination is graphed for incident and reflected shocks as a function of the Mach-number of the incident shock, in nitrogen with an initial pressure of 10 mm Hg and a temperature of 300K. Orig. art. has: 11 figures and 6 equations.

ASSOCIATION: Energeticheskiy institut AN SSSR (Power Engineering Institute, AN SSSR)

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: ME

NO REF SOV: 006 OTHER: 002

Card 2/2

L 20820-65 EWP(m)/EWA(h)/EWT(1)/FCS(k)/EWA(1)/ Pd-1/Pi-4/ BSD/SSD(b)/AFWL/ AEDC(a)/SSD/ASD(f)-3/ASD(p)-3/AFETR/AFTC(a)/RAEM(a)/ESD(gs)/ESD(t) MLK

ACCESSION NR: AT4048014 S/0000/64/000/000/0115/0118

AUTHOR: Zaytsev, S.G., Shatilov, A.P., Lazareva, Ye. V., Trukhanova, L.N.

TITLE: Investigation of the interaction of a reflected shock with the boundary layer of flow behind an incident shock wave

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodinamika i svoystva gazov pri vy*sokikh temperaturakh (Physical gas dynamics and properties of gases at high temperatures). Moscow, Izd-vo Nauka, 1964, 115-118

TOPIC TAGS: gas dynamics, shock wave, reflected shock wave, boundary layer, interferometry, nitrogen shock wave

ABSTRACT: The paper gives the results of a study of the interaction of the front of a reflected shock wave with the boundary layer of an oppositely directed flow, with the aid of an interferometer and high-speed photography as described elsewhere in this same volume. The experiments were carried out at Mach 3-7 and with initial pressures of 10 and 30 mm Hg in commercial nitrogen (about 0.5% oxygen). The speed was measured by photographing a slitted-off part of the interference pattern on a film moving at 0.117 mm/μsec, with an accuracy of 10% for incident and 15% for reflected waves. The density

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L 20820-65
ACCESSION NR: AT4048014

behind the front was also measured and found to be in agreement with calculated values. The interference pattern showed that with Mach numbers up to 6, the perturbation caused by interaction of the reflected shock with the boundary layer of the oppositely directed flow was localized in a certain region adjoining the wall and moving with the reflected shock. After passage of the reflected wave, the gas again became homogeneous. Orig. art. has: 4 figures.

ASSOCIATION: Energeticheskiy institut AN SSSR (Power Engineering Institute, AN SSSR)

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: ME

NO REF SOV: 004 OTHER: 005

Card 2/2

L 20819-65 EWP(m)/EPF(c)/EPR/EWA(h)/EWT(1)/EWT(m)/FCS(k)/EWP(b)/EWP(t)/ Pd-1/ Pi-4/Pr-4/Ps-4 IJP(c)/SSD/AEDC(a)/SSD(b)/AFWL/ASD(f)-3/ASD(p)-3/AFETR/ESD(gs) JD/MLK

ACCESSION NR: AT4048015 S/0000/64/000/000/0119/0126

AUTHOR: Zaytsev, S.G., Shatilov, A.P., Lazareva, Ye. V., Trukhanova, L.N.

TITLE: Measurement of density behind a reflected shock wave in nitrogen 27 B+1

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodinamika i svoystva gazov pri vy*sokikh temperaturakh (Physical gas dynamics and properties of gases at high temperatures). Moscow, Izd-vo Nauka, 1964, 119-126

TOPIC TAGS: gas dynamics, shock wave propagation, nitrogen shock wave, reflected shock wave, gas density oscillatory relaxation

ABSTRACT: The paper is a continuation of previous work by the authors and deals with the reflection of a shock wave by the solid end of a shock-tube which contains industrial nigrogen (with about 0.5% oxygen). Using fixed illumination, the change in density with time was determined by an interference method and recorded on film moving at 0.117 mm/μ sec, both for the incident and reflected waves. The shocks propagated at Mach 3 to 6; the initial pressures were 10 and 3 mm Hg, the maximum temperature in the reflected shock was 4000K and dissociation was 0.2%. The equilibrium and non-equilibrium densities for a section 52 mm from the end are graphed for Mach 2.9, 3.8 and 5.6. The time to

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ACCESSION NR: AT4048015

equilibrium density agrees with that of the oscillatory relaxation found by Blackman. The density behind the reflected shock was also obtained by continuous scanning, at 3 mm from the reflecting end of the tube where interaction with the boundary layer can be neglected. At higher Mach numbers density increases with time; thus the density becomes greater than the calculated value and the divergence increases with time. The appendix deals with equilibrium values of thermodynamic parameters behind incident and reflected shocks on the basis of mass, energy and momentum conservation and the equations of state. The results for a shock in nitrogen at 300K and 10 mm Hg are tabulated, and formulas are given for nonequilibrium values of thermodynamic parameters for incident and reflected shock waves. Orig. art. has: 2 tables, 5 figures and 18 equations.

ASSOCIATION: Energeticheskiy institut AN SSSR (Power Engineering Institute, AN SSSR)

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: ME, TD

NO REF SOV: 008 OTHER: 000

Card 2/2

ACCESSION NR: AP4044736 S/0207/64/000/004/0143/0149

AUTHORS: Zaytsev, S. G. (Moscow); Lazareva, Ye. V.(Moscow); Shatilov, A. P. (Moscow)

TITLE: Investigation of normal shock wave reflection in a shock tube

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1964, 143-149

TOPIC TAGS: Mach number, argon, nitrogen, carbon dioxide, shock tube/ Mach Zender interferometer

ABSTRACT: The normal reflection of a shock wave from a solid wall was investigated inside a 72 x 72 mm shock tube with 4.5 mm low-pressure chamber length and 9 mm high-pressure chamber length. Shift in the interference bands ΔS was determined to within 0.1 band on a Mach-Zender interferometer. The absolute errors in density for nitrogen, carbon dioxide, and argon gases were 0.308×10^{-5}, 0.319×10^{-5}, and 0.462×10^{-5} g/cm^3, respectively. First, the state of the gas behind the incident shock wave was studied in N_2, CO_2, and argon gas for initial pressures of 10, 30, and 100 mm Hg respectively at $2 \leqslant M_s \leqslant 6$. Density measurements were made by means of continuous scanning with a vertical slit. The density field ρ_1/ρ_0 for CO_2 was

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plotted versus M_s for complete thermodynamic equilibrium and thermal equilibrium between translational and 667 cm^{-1} vibrational level, with 1336 and 2350 cm^{-1} frozen. Next, the density field behind the reflected shock wave was measured using both vertical and inclined slits. For $3<M_s<4$ and 10 mm Hg pressure the measured density field in CO_2 agreed very well with theoretical calculations. The density field in nitrogen was measured in the range $2\leq M_s\leq 6$. Vibrational relaxation times behind the reflected shock were around 1 μsec. Argon measurements covered a Mach range $2<M_s<5$. It was found that for incident Mach numbers less than six density measurements behind the reflected shock agreed with calculations to within 3%. "The authors are deeply grateful to L. M. Trukhanova for taking part in the experiments and reducing the data." Orig. art. has: 7 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 26Jul63

ENCL: 00

SUB CODE: ME

NO REF SOV: 003

OTHER: 009

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001548710019-5"

USSR / Optics K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10367

Author : Tolstoy, N.A., Shatilov, A.V.
Inst : State Optical Institute, Leningrad USSR
Title : Formal Analysis of the Theory of the Two-Step Excitation of Phosphorescence and Photoconductivity. I. Stationary Relations.

Orig Pub: Optika i spektroskopiya, 1956, 1, No 2, 216-229

Abstract: A formal analysis is given of the stationary relations of the brightness of glow I_∞ and the photoconductivity $\Delta\sigma$ on the intensity of the exciting light E in the two-step excitation of phosphorescence and photoconductivity scheme under the assumption that the recombination is subject to the reaction of the first order (pseudomonomolecularity). It is proposed that the primary absorption of the light transfers the electrons to the first step of the scheme (local levels 1, which under definite circumstances can merge in the impurity band). Upon secondary absorption of the light, the electrons are transferred from the first step of excitation to the second --

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USSR / Optics K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10367

to the conduction band (2). Account is taken of the possibility of thermal throwover from the first excitation step into the second -- and also of the repeated adhesions ($2 \rightarrow 1$). It is found that n_1 (the stationary of electrons at levels 1, proportional to the photoconduction over the impurity zone) first increases linearly with increasing E, and then becomes proportional to $E^{1/2}$ (the interval in which the "square root" law is valid increases with the increasing probability of the repeated adhesions), and finally, tends to saturation. The quantity $n_{2\infty}$ (stationary number of electrons in zone 2, proportional to the brightness of glow and to the photoconduction over zone 2) increases with increasing E, depending on the ratio of the scheme parameters, either (1) first linearly and then superlinearly (up to $n_{2\infty} \propto E^2$) and finally again linearly, or else (2) linearly, sublinearly, and again linearly. The flow yield is estimated for possible ratios of the scheme parameters. The theoretical results are compared with the experimental data on the dependence of I_∞ (E) and $\Delta\tau_\infty$ (E).

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SHATILOV, A.V.

A theoretical property of luminescence and photoconductivity relaxation curves. N. A. Tolstoi and A. V. Shatilov (Lensovet Technol. Inst., Leningrad). *Zhur. Eksper. i Teoret. Fiz.* 30, 109–13(1956).—The ratio $s = L_s/L_d$ (L_s is the area under the starting curve of light intensity I or photocond. $\Delta\sigma$ and L_d is the area under the decay curve) is calcd. by integrating the equation $dn/dt = E - \beta n^2 - \gamma n$, where n is the no. of carriers. It is shown that all calcns. lead to $s < 3$, whereas expts. with sulfide phosphors lead to $s \approx 10$–12. S. Pakswer

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SUBJECT: USSR/Luminescence 43-4-4/48

AUTHORS: Tolstoy N.A. and Shatilov A.V.

TITLE: On the Possibility of Two-Step Excitation of Photosemiconductor Phenomena (O vozmozhnosti dvukhstupenchatogo vozbuzhdeniya fotopoluprovodnikovykh yavleniy)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21 #4, p 494 (USSR)

ABSTRACT: A number of stationary and relaxation regularities in luminescence and photoconductivity cannot be accounted for by existing theories. These regularities are characteristical for phosphors and photoresistances which are quenched by temperature.

For explanation of these regularities a two-step mechanism of electron excitation in the pseudomolecular character of recombination can be proposed. Equations of the two-step theory qualitatively agree with experience when quenching is absent or insignificant.

In particular, photoconductivity is found to be proportional to the square root of excitation intensity within a wide range

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48-4-4/48

TITLE: On the Possibility of Two-Step Excitation of Photosemiconductor Phenomena (O vozmozhnosti dvukhstupenchatogo vozbuzhdeniya fotopoluprovodnikovykh yavleniy)

of variations of the latter. This conclusion agrees with the well-known law for the conventional photoconductivity.

Three Russian references are cited.

INSTITUTION: Not indicated.

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

SOV/51-5-5-14/23

AUTHORS: Tolstoy, N.A. and Shatilov, A.V.

TITLE: Formal Analysis of the Theory of Two-Step Excitation of Phosphorescence and Photoconductivity. (Formal'nyy analiz teorii dvukhstupenchatogo vozbuzhdeniya fosforestsentsii i fotoprovodimosti). II. Relaxation Relations (II. Relaksatsionnyye zavisimosti)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 5, pp 590-600 (USSR)

ABSTRACT: In Part I (Ref 1) the authors considered steady-state relations which followed from the two step excitation theory. The present paper discusses relaxation relations which correspond to rise or decay of phosphorescence and photoconductivity under excitation by square pulses of light. It is assumed that decay processes begin after reaching a state of equilibrium under the pulse excitation, and the rise processes are taken to occur after complete relaxation of the excited states. Rise curves are considered first and the structure of one such curve is shown in Fig 1. Decay curves are shown in Fig 2 curve 3 (which is the sum of exponential curves 1 and 2) and Fig 4 which shows a non-monotonic decay of a light-sum. Fig 3 illustrates relaxation processes as functions of the excitation intensity. The paper is entirely theoretical. There are 4 figures and 8 references, 7 of which are Soviet and 1 Polish.

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1. Phosphorescence--Theory 2. Photoconductivity--Theory 3. Photoconductivity--Excitation 4. Phosphorescent materials--Excitation 5. Phosphorescent decay

SHATILOV, A.V.

Scattering of light by dielectric ellipsoids comparable to the wave length. Part 1. Opt.i spektr. 9 no.1:86-91 Jl '60. (MIRA 13:7)

(Dielectrics) (Light--Scattering)

35899 R
S/051/60/009/002/012/013/XX
E032/E414

AUTHOR: Shatilov, A.V.

TITLE: On the scattering of light by dielectric ellipsoids comparable in size with a wavelength. II. Dependence of the scattering function on the dimensions, form and orientation of the ellipsoid. The scattering coefficient

PERIODICAL: Optika i spektroskopiya, 1960, Vol.9, No.2, pp.235-243

TEXT: The first part of this paper was published in Vol.9, p.86 (1960) of the present journal. In accordance with the expression

$$I = I_0 \frac{k^4}{\varepsilon_1^2} \cdot \frac{P_{0\perp}^2}{E_0^2} v^2 f^2(q), \qquad (1)$$

where $f(q) = \frac{3}{q^3}(\sin q - q\cos q)$; $I_0 = \frac{c}{8\pi}\sqrt{\varepsilon_1}\, E_0^2 \frac{1}{r^2}$;

$q = 2\rho \sin\frac{\vartheta}{2}\sqrt{1+\varepsilon\cos^2\vartheta}$; $\varepsilon = \frac{\varepsilon^2}{1-\varepsilon^2}$, $\rho = 2\pi\frac{b}{\lambda}$,

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On the scattering of light ...

which was derived in Part I, the scattering function (indicatrix) is determined by the parameters $P_{o\perp}$ and q. The dependence of the latter two quantities on the dimensions, form, dielectric properties and orientation of the ellipsoid must be known. In these expressions ε is the eccentricity of the ellipsoid, b is the semi-axis which is not a symmetry axis, β is the scattering angle, α_1 is the cosine of the angle between the normal to the scattering layers and the symmetry axis of the ellipsoid, $\underline{k}$ is the wave vector, r is the distance to the particle and V is the volume of the ellipsoid. It is recalled that $P_{o\perp}$ is determined by the polarization of the ellipsoid while q depends on the number of waves which can be fitted into the particle in the direction of the normal to the "reflecting" layers (c.f. Ref.1: A.V.Shutilov, Opt. i spektr., 9, 86, 1960). The magnitude and direction of the vector $\underline{P}_{o\perp} = [\underline{n}_o [\underline{n}_o \underline{r}]]$ depends on the orientation, eccentricity and the dielectric constants of the ellipsoid and the medium, and also on the direction of the vector $\underline{n}_o$. In fact, if $\alpha_o, \beta_o, \gamma_o$ are the direction cosines of the vector $\underline{n}_o$ in the system of coordinates attached to the ellipsoid

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(2)

The direction of the 3 axis in the case of the above ellipsoid can always be looked upon as perpendicular to the vector R_0, in which case P_3 will vanish and Eq.(2) assumes a simpler form. The other two components of P are then given by

Величина и направление вектора $P_{3\perp} = [R_3[R_0P]]$ определяется ориентацией, эксцентриситетом и диэлектрическими постоянными эллипсоида и среды, а также направлением вектора R_0. (3)

where

Действительно, если x_0, y_0, z_0 — направляющие косинусы вектора R_0 в системе координат, связанной с эллипсоидом вращения

$$\frac{x^2}{a^2}+\frac{y^2}{b^2}+\frac{z^2}{c^2}=1, \quad (4)$$

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7 Оптика и спектроскопия, т. IX, вып. 2

On the scattering of light ...

so that (5)

In these expressions Eq. marked "C", p.234 and Eq.(6), p.234 have accidentally been cut into when taking out the equations on p.233. We regret that we have no further copy of this journal and cannot, therefore, rectify our error.
represent the effective polarizability of the ellipsoid along the axes and are functions of the form factors A_φ and A_η. Furthermore, $E_{o\varphi}$ and E_{oo} are the components of $\underline{E}_o$ so that finally

(6)

where γ_φ and γ_η are the direction cosines of the vector E_o. In the system of coordinates attached to the vectors $\underline{E}$ and $\underline{H}$ (Fig.1) in which the direction of the symmetry axis of the ellipsoid is defined by the angles Δ and φ while the direction

...n the scattering of light ...

of the vector $\underline{R}$ is defined by the angles β and φ', the direction cosines of $\underline{R}$ and $\underline{E}$ in the previous system of coordinates are given by

$$x_0 = \sin\beta \sin\Delta \cos(\varphi - \varphi') + \cos\beta \cos\Delta,$$

$$y_0 = \frac{1}{l_\eta}(\sin\beta \cos\varphi' - \sin\Delta \cos\varphi\, x_0),$$

$$l_\xi = \sin\Delta \cos\varphi,$$

$$l_\eta = \sqrt{1 - l_\xi^2}.$$

Thus, with known values of the effective polarizability α_φ and α_η, the perpendicular component of the polarization $P_{o\perp}$ is determined (in accordance with Eq.(6)) by the orientation of the symmetry axis of the ellipsoid relative to the vector $\underline{E}_1$ and the direction of the scattering vector $\underline{R}$ relative to the ξ and η axes. In the general case the parameters q and $P_{o\perp}$ must be substituted into Eq.(1) if it is required to compute the

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scattering function. Next, the scattering coefficient can be defined by

$$K(\gamma, \varepsilon, \Delta, \varphi) = \int I(\omega)\, d\omega = I_0 \frac{A}{c^4} v^4 K_0,$$

where

$$K_0 = \int \frac{\mu_{0_2}^2}{E_0^2} f^2(q)\, dq' \sin\beta d\beta.$$

The function $f^2(q)$ can be expanded into the series

$$f^2(q) = 3^2 \cdot 2^3 \cdot \sum_{n=0}^{\infty} A_{n+2} (2q)^{-n},$$

where the coefficients are given by

$$A_n = \frac{(-)^n}{(2n)!} \cdot \frac{n-1}{n+1}.$$

When the axis of symmetry of the ellipsoid is parallel to the wave vector, then

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$$K_1 = C_0 \sum [illegible] \sum [illegible] \qquad (11)$$

where

$$D_l^n = [illegible]$$

and

$$C_0 = [illegible]$$

The quantity $\tau_n = (k\rho)^{2n}\sigma$ characterizes the dimensions and form of the ellipsoid $(\sigma = e^2/(1 - e^2))$. The above expressions are then used to compute the scattering functions for prolate and oblate ellipsoids. For example, Fig. 9 shows the scattering function for a prolate (1) and oblate (2) ellipsoids whose symmetry axes lie in the plane parallel to the vectors $\vec{E}$ and $\vec{H}$ and make an angle $\Delta = 45°$ with them. These functions are plotted for $b/a = 1/3$ (curve 1) and $b/a = 9$ (curve 2). Fig. 10 shows the forward-to-backward scattered intensity ratio as a function

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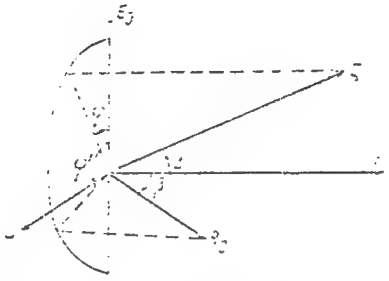
APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001548710019-5"

...the scattering of light ...

...the good accuracy (ratio of ... for various silk solids. ... refer to the following volumes of the ... 1959, 6, 27, 61 and 129 (the units of length are the ... under in which ρ is measured). Acknowledgment is made to ... for his advice. There are 10 figures and 3 German references.

SUBMITTED: October 16, 1959

Card 6/9



Where: Orientation of the symmetry axes of the ellipsoid S and the scattering vector $\underline{R}$ in the set of coordinates attached to $\underline{E}$ and $\underline{\Pi}$.

43407

S/051/62/013/005/013/017
E032/E314

AUTHOR: Shatilov, A.V.

TITLE: Anomalous scattering as a case of scattering by a system of particles

PERIODICAL: Optika i spektroskopiya, v. 13, no. 5, 1962, 728 - 733

TEXT: The phenomenon of anomalous scattering which was discovered by M.M. Gurevich (ZhTF, 23, 986, 1953) and A.I.Kolyadin (Opt. i spektr., 1, 907, 1956) consists in the preferential scattering of light in backward directions and the anomalously high exponent of the wavelength in the scattering cross-section (8 or 9 instead of the 4 predicted by the Mie theory (G.Mie. Ann.Phys., 25, 377, 1908; K.S. Shifrin. Rasseyaniye sveta v mutnoy srede (Dispersion of light in a turbid medium), Moscow, 1951]. The scattering was found to be due to inclusions with a somewhat different refractive index. It can be shown that this means that the quadrupole component is the leading component, and the first step in the explanation of the phenomenon is to show why the dipole component is absent. General considerations indicate

Card 1/3

Anomalous scattering ....

that whatever the dimensions of the scattering particles, the quadrupole component cannot predominate if the scattering occurs on isolated isotropic particles. The only remaining possibility is, therefore, to consider the scattering by a system of particles. The simplest model to consider is that in which all the particles surrounding a given particle can be replaced by a homogeneous medium with some average permittivity $\bar{\varepsilon}$, which represents the presence of particles with permittivity ε, while the empty spaces in the immediate neighbourhood of the particles under consideration (which have a permittivity ε_o) are replaced by a spherical layer of radius r_1, which is somewhat larger than the radius of the particle r. The entire system is thus replaced by two spherical particles, one inside the other, with permittivities ε and ε_o, respectively. The former is larger and the latter smaller than the average permittivity. The radius of the outer sphere is chosen so that the polarization induced by an external uniform field in the inner particle should be equal and opposite to the polarization of the outer particle. This gives rise to the disappearance of the dipole component so that the

Card 2/3

Anomalous scattering ....

quadrupole component predominates and the scattering coefficient is proportional to λ_o^{-8}. The forward scattering is then approximately zero and most of the energy is scattered in the backward direction. Detailed analysis shows that for wavelengths which are greater than $5r$ the scattering is always preferentially in the backward direction. It was found that the double-sphere model gave a good representation of the experimental results. The form of the angular distribution can be used to deduce the size of the scattering particles. It is concluded that this simple model represents all the main properties of the phenomenon, including the physical significance of the appearance of the quadrupole component and the form of the scattering function. There are 3 figures.

SUBMITTED: March 15, 1961

Card 3/3

SHATILOV, A.V.; TYUTIKOVA, L.P.

Example of designing an interference light filter by the method of consecutive synthesis. Opt. i spektr. 14 no.3:426-429 Mr '63. (MIRA 16:4)

(Light filters—Design and construction)

SHATILOV, A. V.

"Methods for determining dimensions of microinhomogeneities."

report submitted for 4th All-Union Conf on Structure of Glass,Leningrad, 16-21 Mar 64.

SHATILOV, D.V.; POLOSIN, I.A.

Using gas infrared radiators for warming up free-flowing materials frozen in railroad cars. Gaz. prom. 9 no.6:19-22 '64.
(MIRA 17:8)

SHATILOV, D. V., inzh.

Using infrared rays for the recovery of the friability of frozen freight. Mekh.i avtom.proizv. 18 no. 5:30-32 My '64. (MIRA 17:5)

SHATILOV, D.V. LAPIN, V.S., VYCHEROV, [illegible], master

Unloading of frozen ores. Zhel. dor. transp. [illegible] (MIRA 18:9)
Ja '65.

1. Starshiy inzh. Promtransniiproyekta (for Shatilov).
2. Nachal'nik chelezndorozhnogo tsekha Novotul'skogo metallurgicheskogo zavoda (for Lapin). 3. Novotul'skiy metallurgicheskiy zavod (for Vycherov).

SHATILOV, E., inzh.-mayor

Aerodynamics of rarefied gases. Av. i kosm. 46 no.4:72-74 Ap '64. (MIRA 17:3)

L 21719-65 EWT(1)/EWP(m) Pd-1 AEDC(a)/ASD(f)-3/AFETR
ACCESSION NR: AP5000078 S/0209/64/000/004/0072/0078

AUTHOR: Shatilov, E. (Engineer, Major)

TITLE: Aerodynamics of rarefied gases

SOURCE: Aviatsiya i kosmonavtika, no. 4, 1964, 72-78

TOPIC TAGS: free molecular flow, rarefied gas dynamics, aerodynamic force, aerodynamic coefficient, motion mechanics

ABSTRACT: The principal problems involved in rarefied gas aerodynamics are discussed. It is pointed out that under conditions of high rarefaction, the methods of aerodynamic computation based upon a consideration of the gas stream as a continuous medium are no longer acceptable. The degree of rarefaction of a medium is determined from the magnitude of the mean length of the molecular free path, which is found to vary with altitude. Some of the problems of free molecular flow are discussed in greater detail. It is assumed that some of the molecules of the gas, in striking the wall, are temporarily adsorbed and absorbed by the surface and later emitted. It is pointed out here that the process of emission is not dependent upon the former velocities of the molecules, while the direction of movement of the reflected molecules has a random character. The aerodynamic forces for a gas in a practically motionless state are calculated. The
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L 21719-65
ACCESSION NR: AP5000078

article shows that these forces will be different for a high-velocity gas moving along the surface of a body. The aerodynamic characteristics of a vehicle in flight are also determined. The aerodynamic coefficients of aircraft are shown to be quite considerable in the regions of free-molecular and near-free-molecular flows. The problems posed by aerodynamic forces in the region of gas flow with slipping and their theoretical solutions are mentioned. The author stresses solutions in the field of rarefied gas aerodynamics, as well as calculating the aerodynamic characteristics of bodies. Orig. art. has: 5 figures and 8 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ME, AC

NO REF SOV: 000 OTHER: 000

Card 2/2

[redacted], P. I.

Abr., Saratov State Univ. im. N. G. Chernyshevskiy, -1939-46-. "Effect of Fertilizers and Spraying on Plants Affected by Hot Dry Wind," Dok. AN, 25, No. 5, 1939; "Action of Iris Halophila on the Development of the Lemon-Tree," ibid., 53, No. 1, 1946.

Changes in ripening dates of fruit and direction of enzymic activity in hybrid seedlings of apple under the action of the mentor [root stalk]. F. V. Shatilov and R. A. Prikavkina (Agr. Inst., Saratov). *Fiziol. Rastenii* 2, 454-8(1955).—Young hybrid apple seedlings show a direct correlation of enzymic (invertase) activity with dates of fruit ripening; the early-ripening plants show less vigorous formation of sucrose. An analogous action is produced by grafting of mentor plants of relatively poor quality onto the expt. plants.

G. M. Kosolapoff

(1)

Shatilov, F.V.

USSR/Forestry - Forest Cultures. K.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 95835

Author : Shatilov, F.V., Fedorov, N.I.

Inst : N.A. Maksimov Academy AS USSR

Title : Experiment of Physiological and Anatomic-Morphological Diagnosis in Preparation of Seedlings of Tree Species for Autumn Planting.

Ori Pub : V. sb.: Pamyati akad. N.A. Maksimova, M., AN SSSR, 1957, 225-232.

Abstract : Observations conducted in a forest nursery in Saratovskaya Oblast showed that survival of seedlings of Fraxinus viridis Mchx. as well as of F. excelsior L. and the small-leaved elm is greatest during transplanting in the stage of autumn attenuation of cambium activity in the stem. The dying away of cambium activity coincides with the

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Card 2/2

I

USSR / Plant Physiology. Photosynthesis.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34231

Author : Shatilov, F. V.; Sus, N. N., Sorokona, Ye. M.
Inst : Saratov Agricultural Institute
Title : The Course of Grain Ripening and Some Aspects of Photosynthesis in Corn under Various Conditions of Water Supply.

Orig Pub : Tr. Saratovsk. S.-kh. in-ta, 1957, 10, 337-347.

Abstract : Denseness of plant standing in a nest was studied with and without irrigation in relation to the course of grain ripening of corn of the North Dakota variety in connection with its photosynthetic activity. The denseness of corn standing in a nest did not affect the ripening of grain, nor the chlorophyll content in the leaves. During the ripening, an increase of the absolute weight of grain was observed; the weight increase of the grain - according to

Card 1/2

USSR / Plant Physiology. Photosynthesis. I

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34231

the length of the cob from top to base - was also ascertained, with irrigation, the ripening proceeded faster and a decrease of absolute weight of grain was observed. The intensity of photosynthesis and the accumulation of chlorophyll - under conditions of irrigation - increased. The conclusion is made that ripening of corn grain is related to the accumulation of chlorophyll in the leaves and to the intensity of photosynthesis. -- S. N. Korelkina.

Card 2/2

4

LUSHCHIK, N.; SHATILOV, G.

Shortcomings in the work of a trade-union council. Prof.soiuzy 3 no.8:37-42 Ag '53. (MLRA 6:8)

(Chelyabinsk--Trade-unions) (Trade-unions--Chelyabinsk)

SHATILOV, I. S.

USSR/ Agriculture

Card 1/1 Pub. 123 - 13/16

Authors : Shatilov, I. S., Cand. of Agricult. Sc.

Title : Utilization of fallow land

Periodical : Vest. AN Kaz. SSR 12, 86-89, Dec 1954

Abstract : Experimental data are presented showing the advantages of utilizing fallow land for agricultural purposes (wheat and potato growing). Tables.

Institution : .....

Submitted : .....

USSR / Plant Physiology. Photosynthesis I

Abs Jour : Rof Zhur - Biol., No 1, 1959, No 1269

Author : Shatilov, I. S.; Rachinskiy, V. V., and Polikarpova, L. G.
Inst : Timiryazov Agricultural Academy
Title : Photosynthesis in Perennial Grasses and Winter Wheat Under Negative Temperatures.

Orig Pub : Iz. Timiryazovsk. S.-Kh. Akad., No. 3, 207-212, 1957

Abstract : Radioactive isotope of C^{14} was used to determine the intensity of photosynthesis in red clover, blue alfalfa, [Medicago sativa], meadow timothy, meadow fescue, winter wheat Moskovskaya 2453, and wheat-grass hybrid No 599, grown under field conditions. In the perennial grasses and winter wheat there was observed a substantial photosynthesis at negative temperature, with the intensity of photosynthesis being the higher the greater a plant's resistance

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I.

USSR/Physiology of Plants - Photosynthesis.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67797

a cover. The photosynthesis intensity declined sharply with low relative humidity, high temperature, and bright illumination; under those conditions respiration exceeded photosynthesis. -- I.B. Sharovatova.

Card 2/2

SHATILOV, I.S., kand. sel'khoz. naik; KALININ, V.I., red.

[Combined checkrow and cluster planting of row crops; from the series "Dostizheniia nauki i peredovoi opyt v sel'skom khoziaistve."] Kvadratno-gnezdovoi posev polevykh propashnykh kul'tur; iz serii "Dostizheniia nauki i peredovoi opyt v sel'skom khoziaistve." Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 40 p. (MIRA 14:12)

(Field crops)

SHATILOV, Ivan Semenovich, kand.sel'skokhoz.nauk; SUMNIK, Z.A., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[How to obtain high corn yields] Kak vyrastit' vysokii urozhai kukuruzy. Moskva, Izd-vo "Znanie," 1960. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.12, Bibliotechka sel'skogo lektora, no.4). (MIRA 14:1)

(Corn (Maize))

SHATILOV, I.S.

Contribution of the Academy's scientists to agricultural production. Izv. TSKhA no.1:14-21 '61. (MIRA 14:3)

1. Proektor po nauchno-issledovatel'skoy rabote Timiryazevskoy sel'skokhozyaystvennoy akademii.
(Agricultural research)

SHLENKER, R., aspirant; SHATILOV, I.S., kand.sel'skokhozyaystvennykh nauk, dotsent

After effect of soil cultivation practices and fallow crops on the yield of grasses [with summary in English]. Izv. TSKhA no.2: 57-71 '61. (MIRA 14:8)

(Tillage) (Fallowing) (Grasses)

SHATILOV, I.S.

December Conference of the Timiriazev Agricultural Academy.
Izv. TSKhA no.2:234-236 '61. (MIRA 14:8)

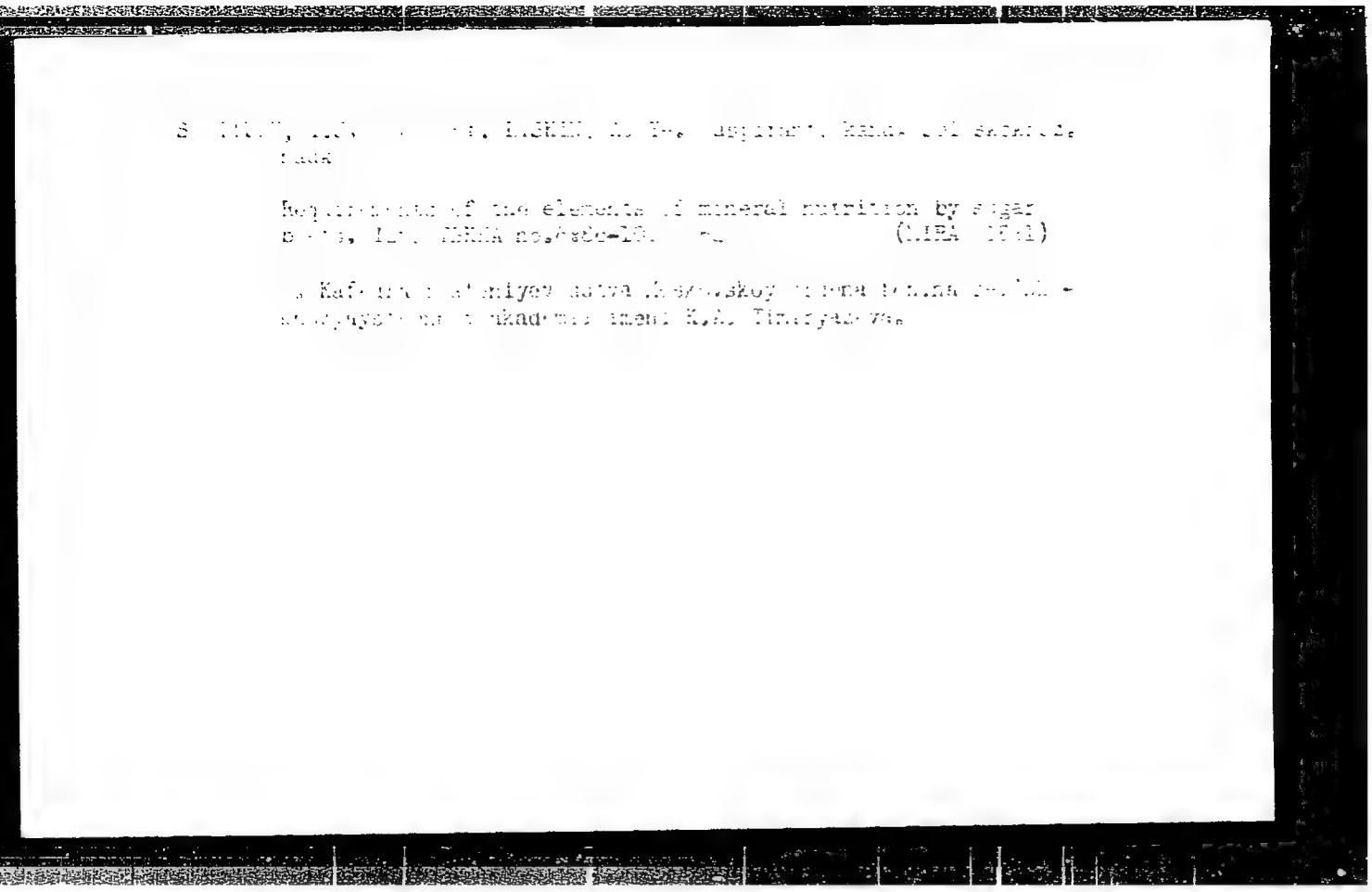
1. Prorektor Timiryazevskoy sel'skokhozyaystvennoy akademii.
(Agricultural research)

GRIGORYAN, A.K., aspirant; MAYSURYAN, N.A., akademik; SHATILOV, I.S., dotsent

Yield and quality of potato tubers under various growing conditions [with summary in English]. Izv. TSKHA no.1:32-46 '62. (MIRA 15:6)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni Lenina (for Maysuryan).

(Potatoes)



MYASNIKOVA, A.V.; KALL', Yu.S.; TRISVYATSKIY, L.A., doktor tekhn. nauk, prof.; SHATILOV, I.S.; LETNEV, B.Ya., red.

[Commercial study of grain and the products of its processing] Tovarovedenie zerna i produktov ego pererabotki. Moskva, Kolos, 1965. 486 p. (MIRA 18:8)

SHATILOV, I.S.

Glorious anniversary. Zemledelie 27 no.8:87-90 Ag '65.
(MIRA 18:11)

1. Rektor Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni Timiryazeva.

POLOZKOV, A.A.; SHATILOV, K.V.; NOSOV, V.A.

Determining tensions in straw shaker shafts of the "Stalinets-8" combine. Sel'khozmashina no.4:20-22 Ap '54. (MLRA 7.5)
(Combines (Agricultural machinery))

SHATILOV, K.V., inzhener; NOSOV, V.A., inzhener

Investigation of stress on the wheel of the "Stalinets-6" combine. Sel'khozmashina no.6:17-19 Je '55. (MLRA 8:8)
(Combines (Agricultural machinery))

SHATILOV, K.V., inzhener; NOSOV, V.A., inzhener; POLOZKOV, A.A., dotsent.

Testing the endurance of suspension rails of primary screens in the "Stalinets-6" combine. Sel'khozmashina no.2:22-23 F '56. (MLRA 9:5)

1. SKB zavoda Rostsel'mash.
(Combines (Agricultural machinery))

LOLENKO, A.K., inzhener; SHATILOV, K.V., inzhener; NOSOV, V.A., inzhener; POLOZKOV, A.A., kandidat tekhnicheskikh nauk; GREBENSKOV, N.P., inzhener.

Determining forces acting upon parts of the cutting apparatus in harvesting large-stemmed crops. Sel'khozmashina no.9:19-21 S '56. (MLRA 9:11)

1. Zavod Rostsel'mash.
(Harvesting machinery)

L 59513-65

ACCESSION NR: AP5018527 UR/0304/65/000/004/0107/0107

AUTHORS: Solomykin, A. P.; Shatilov, K. V.; Vaysman, M. L.; Margolin, Z. I.; Tregub, N. N.; Durnev, M. D. 3 B

TITLE: A device for automatic stretching of chains

SOURCE: Mashinostroyeniye, no. 4, 1965, 107

TOPIC TAGS: stretching, chain stretcher

ABSTRACT: This Author Certificate, No. 167412, presents a device for automatic stretching of chains (see Fig. 1 on the Enclosure). The device consists of a roller fixed to a lever, a tension spring 5, and an adjusting screw. To decrease the wear of the chain, the device is provided with a ratchet gear consisting of an immobile toothed sector 1 and a catch 2 fixed on the lever 4 which adjusts roller 3 according to the elongation of the chain. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: IE

NO REF SOV: 000 OTHER: 000

Card 1/2

L 59513-65

ACCESSION NR: AP5018527

ENCLOSURE: 01

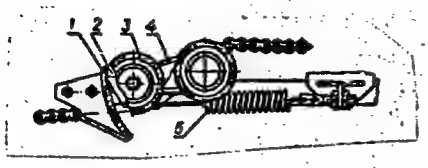


Fig. 1.

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SHATILOV, L., kapitan

Give unceasing attention to field training. Voen.vest. 41 no.10:73-74 O '61. (MIRA 15:2)
(Artillery, Field and mountain)

NIKOLAYEV, A.; FEDORENKO, P.; SHATILOV, N.

Innovators of the Novokramatorsk Machinery Plant sace millions for the national economy. Izobr.i rats. no.2:4-5 F '61. (MIRA 14:2)

(Kramatorsk—Machinery industry)

SHATILOV, O. Ye. (Leningrad K-112, ul. Stakhanovtsev, d. 6/8, kv. 71)

Amputations in the shortening of the lower extremities combined with deformation. Ortop., travm. i protez. 27 no. 1:58-64 Ja '66. (MIRA 19:1)

1. Iz Leningradskogo instituta protezirovaniya (direktor- dotsent M.V. Strukov). Submitted May 5, 1965.

SHATILOV, S., general-leytenant

Patriotic undertaking of members of the All-Union Volunteer Society for Assistance to the Army, Air Force, and Navy. Radio no.1:8-10 Ja '61. (MIRA 14:9)

1. Pervyy zamestitel' predsedatelya TSentral'nogo Komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu. (Radio clubs)

SHATILOV, S., Major General-leytenant

Through aeroclubs to outer space. Kryl. rod. 14 no.8:5-6 Ag '63. (MIRA 16:8)
(Space flight)

SHATILOV, S.; SIMAKOV, B.

"Golden wings" to Soviet motion pictures. Kryl. rod. 14 no.11:26 N '63. (MIRA 16:11)

1. Rukovoditel' Sovetskoy delegatsii na 1-m Mezhdunarodnom kinofestivale aviatsionnykh i astronavticheskikh fil'mov (for Shatilov).

L 26154-66 EWT(1)/FSS-2 JT

ACC NR: AN6014173 (N) SOURCE CODE: UR/9023/65/000/101/0002/0003

AUTHOR: Shatilov, S. (Lieutenant general, First deputy chairman of the central committee)

ORG: DOSAAF

TITLE: Train the youth. [Military and paramilitary training of Soviet youth]

SOURCE: Sovetskiy patriot, 19 Dec 65, p. 2, col. 4-7, p. 3, col. 1-5

TOPIC TAGS: specialized training, ground force training

ABSTRACT: A program for training pre-inductees and inductees in military-oriented sports and specialties is described. The aim of the program is to prepare all draft-age youth for the GZR [Gotov k zashchite Rodiny; Ready to Defend the Homeland] badge, which attests to (1) the youth's physical fitness, (2) mastery of at least one technical specialty and (3) understanding of the aims and tasks of service in the Soviet armed forces. GZR candidates engage in such sports as grenade throwing, marksmanship, skiing and parachute jumping and learn to become radio operators, etc.

SUB CODE: 15/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 1/1

ACC NR: AP6032150 SOURCE CODE: UR/0096/66/000/010/0035/0039

AUTHOR: Pavlovskiy, G. I. (Candidate of technical sciences); Bratalin, E. G. (Engineer); Smirnov, S. P. (Engineer); [illegible] (Engineer)

ORG: Khar'kov Politechnical Institute imeni V. I. Lenin (Khar'kovskiy politekhnicheskiy institut)

TITLE: Study of the discharge capacity of guide vane cascades in the last stage of the K-500-240 KhTGZ turbine

SOURCE: Teploenergetika, no. 10, 1966, 35-39

TOPIC TAGS: guide vane, turbine, discharge capacity, cascade, discharge coefficient, subsonic flow, supersonic flow, wet steam/K-500-240 turbine

ABSTRACT: An experimental determination was made of the discharge coefficient of the flow of superheated and wet steam at the plane cascades of a guide vane at the last stage of a K-500-240 KhTGZ turbine at actual M and Re numbers. It was found that at subsonic flow rates the discharge coefficient decreases with an increase in the pitch/chord ratio, apparently as the result of the increasing difference between the actual and effective flow exit angles. At

Card 1/2 UDC: 621.165.533.6.001.5

supersonic flow rates, the dependence of discharge capacity on the magnitude of the pitch/chord ratio was found to be rather weak, probably owing to the close agreement between the actual and effective flow exit angles. Orig. art. has: 5 figures. [Based on authors' abstract]

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 008/

SHATILOV, S., general-leytenant.

V.I. Lenin on the defense of the socialist fatherland. Voen.znan. 31 [i.e. 32] no.4:2-3 Ap '56. (MLRA 9:8)
(Lenin, Vladimir Il'ich, 1870-1924)

107-57-2-2/56

AUTHOR: Shatilov, S., Lieutenant General, the First Deputy Chairman of the Central Committee of DOSAAF

TITLE: A Faithful Guard of the Soviet State
(Vernyy strazh sovetskogo gosudarstva)

PERIODICAL: Radio, 1957, Nr 2, pp 1-3 (USSR)

ABSTRACT: February 23, 1957 is the date of the 39th Anniversary of Soviet Army and Navy. The might of Soviet regime and Soviet Armed Forces is noted. A brief outline of WW2 is given, in which the following statements are made: "Timely preparation of the country and the army for resistance to the armed enemy was seriously impeded by Stalin's incorrect evaluation of the military and political situation on the eve of the war, which excluded the possibility of Germany's attack against the USSR in the near future". "... the press-disseminated contention that our troops were retreating according to a previously developed so-called 'plan of active defense' is unsubstantiated". "Our victory has shown the full superiority of Soviet State over the enemy in economic, political, moral, and military respects". The main purpose of DOSAAF is to inrease the defensive power of the USSR. Mass training of radio specialists is important for the naticnal economy as well as for the Armed Forces. Demobilized military radio operators are helping to train young radio specialists in many DOSAAF organizations. V. Kuz'minov (UB5QA, Zaporozh'ye), formerly a Section Sergeant of radio corps is teaching the young amateurs now. Other former servicemen: V. Luk'yanenko (a smith at a measur-

Card 1/2

A Faithful Guard of the Soviet State 107-57-2-2/56

ing instrument factory), I. Kovalenko (a physics teacher at the "Abrau-Dyurso" sovkhoz), V. Khukharev (deputy chief of a collective radio station); they are working at the Krasnodar DOSAAF radio club. A young Komsomol member E. Sukhorukov, trained by Khukharev, was drafted to the Soviet Army recently; "the knowledge and experience acquired by him at the radio club proved to be very useful". Another draftee I. Yurchenko, also from the Krasnodar radio club, states that he "joined the Army as an accomplished radio operator". The author urges every possible encouragement of youth training at local radio clubs.

AVAILABLE: Library of Congress

Card 2/2

SHATILOV, S.S., general leytenant

All-Union Volunteer Society for assistance to the Army, Air Force, and Navy works for the motherland. Za rul. no.11:3-4 N '57. (MIRA 11:1)

1.Pervyy zamestitel' predsedatelya prezidiuma TSentral'nogo komiteta Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu.
(Automobile drivers)

SHATILOV, S., general-leytenant.

Thirtieth anniversary of the mass defense society. Voen.znan. 33 no.1:1-2 Ja '57. (MIRA 10:10)

1. Pervyy zamestitel' predsedatelya TSentral'nogo Komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR. (Military education)

SOV/107-58-2-3/32

AUTHOR: Shatilov, S., Lieutenant General, First Vice Chairman of the Tsk DOSAAF SSSR

TITLE: Faithful Guard of the Soviet State (Vernyy strazh Sovetskogo gosudarstva)

PERIODICAL: Radio, 1958, Nr 2, p 6-8 (USSR)

ABSTRACT: The author gives a political-historical review of the activities of the USSR Armed Forces on the occasion of their 40th anniversary. Then, he points out the importance of the DOSAAF Organizations, especially the radio amateur clubs, for training future military radio operators. There is 1 photo.

1. Armed forces—USSR 2. Radio 3. Military personnel—Training

Card 1/1

SHATILOV, S., general-leytenant

All-Union convention of the All-Union Volunteer Society for Assistance to the Army, Air Force, and Navy. Voen. znan. 34 no.1: 1-3 Ja '58. (MIRA 11:2)

1. Pervyy zamestitel' predsedatelya TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR. (Military education)

SOV/107-59-1-2/51

AUTHOR: Shatilov, S., Lieutenant-General, First Vice-Chairman

TITLE: The More Important Tasks of the Radio-Amateur Movement (Vazhneyshiye zadachi radiolyubitel'skogo dvizheniya)

PERIODICAL: Radio, 1959, Nr 1, pp 3-5 (USSR)

ABSTRACT: The radio-amateur movement, forming an organizational part of DOSAAF, is entering a new era of development. During 1958, more than 150 exhibitions containing about 12,000 electro-engineering and electronic displays built by radio amateurs were organized in the USSR. At the 15th All-Union exhibition in Riga in 1958, more than 380 successful devices constructed by radio amateurs were displayed. One of them, a device for diagnosing heart-diseases, is now being manufactured by the Moskovskiy gorodskoy sovnarkhoz (Moscow Municipal Sovnarkhoz). A number of devices for use in the petroleum industry was accepted by the trest Grozneft' (Grozneft' Trust). The high technical knowledge of radio amateurs makes it possible to employ them in solving serious economic and scientific problems Thus, the Lithuanian SSR State Economic Council announced a contest in the construction of electronic

Card 1/3

The More Important Tasks of the Radio-Amateur Movement

automatic devices, in which the radio amateurs are participating. Furthermore, DOSAAF members are participating in a competition announced by the USSR Ministry of Communications to draw a map of the USSR territory indicating the electric conductance of the soil. During 1958, the DOSAAF organizations trained 21,248 radio amateurs, the same number as were trained during the three previous years. The number of radio-amateur stations increased 4 1 times during the last 2 years. In the Bashkirskaya ASSR alone, about 100 radio-amateur stations are operating. In the next 7 years, an important development will take place in the fields of radio communication, radio broadcasting, television, and radiofication. The number of radio-relay stations will be increased by 6 times, and the number of television centers by 2.6 times. Also the local radio communication network will be considerably expanded.

Card 2/3

SOV/107-59-1-2/51

The More Important Tasks of the Radio-Amateur Movement

This will call for many more specialists to be trained by DOSAAF organizations

ASSOCIATION: TSK DOSAAF SSSR

Card 3/3

SHATILOV, S.S.

Together with the party, together with the people. Voen. znan. 37 no.10:3-4 O '61. (MIRA 14:9)

1. Pervyy zamestitel' predsedatelya TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Military education)

SHATILOV, S.S.

Most important task of a society for defense. Voen. znan. 38 no.7:1-2 Jl '62. (MIRA 15:6)

1. Pervyy zamestitel' predsedatelya TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu. (Military education)

SHATILOV, S., general-leytenant

Radio amateurs contribute to technological progress. Radio no.8: 8-9 Ag '63. (MIRA 16:9)

1. Pervyy zamestitel' predsedatelya TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu. (Radio--Technological innovations)

VASIL'YEVA, N.N., kand. med.nauk, GOLUBEVA, K.I., kand. med. nauk; GUL'KEVICH, Yu.V., prof.; DAL', M.K., doktor med.nauk, prof.; IL'INA, A.V., kand.med. nauk; LEVKOYEVA, E.F., doktor med.nauk, prof.; MASLOVA, I.P., kand. med.nauk; PRIGOZHINA, A.L., kand. med.nauk; UGRYUMOV, B.P., prof.; SHATILOVA, T.A, kand. med.nauk; SHCHEGLOVA, A.A., kand. med.nauk; DVIZHKOV, P.P., prof., red. toma; STRUKOV, A.I., prof., red. toma; OSTROVERKHOV, G.Ye., prof., glav. red.; APATENKO, A.K., kand. med. nauk, nauchn. red. toma

[Multivolume handbook on pathological anatomy] Mnogotomnoe rukovodstvo po patologicheskoi anatomii. Otv. red. A.I. Strukov. Moskva, Medgiz. Vol.1. [History of pathological anatomy; pathological anatomy of the endocrine glands, skin, ear, and eye] Istoriia patologicheskoi anatomii; patologicheskaia anatomiia zabolevanii endokrinnykh zhelez, kozhi, ukha i glaza. Red. toma: P P.Dvizhkov i dr. 1963. 670 p. (MIRA 16:11)

1. Chlen-korrespondent AMN SSSR (for Strukov).
(ANATOMY, PATHOLOGICAL)

[redacted], ...

Agriculture

Repair of principle parts of a tractor; Moskva, Gos. izd-vo sel'khoz lit-ry, 1951.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, May 1952. Uncl.

1. SHATILOV, V. A., Engr.

2. SSSR (600)

4. Mine Explosions

7. Sudden coal and gas ejection at the "Andreevskii" seam of the "Krasnyy Oktiabr" mine no. 1-2.
Ugol' 27 No. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

SHATILOV, V. A.

"Investigation of the Geological Structure of Coal Layers That Are Dangerous Relative to Sudden Ejections of Coal and Gas." Cand Geol-Min Sci, Novocherkassk Polytechnic Inst, Novocherkassk, 1954. (RZhGeol, Nov 54)

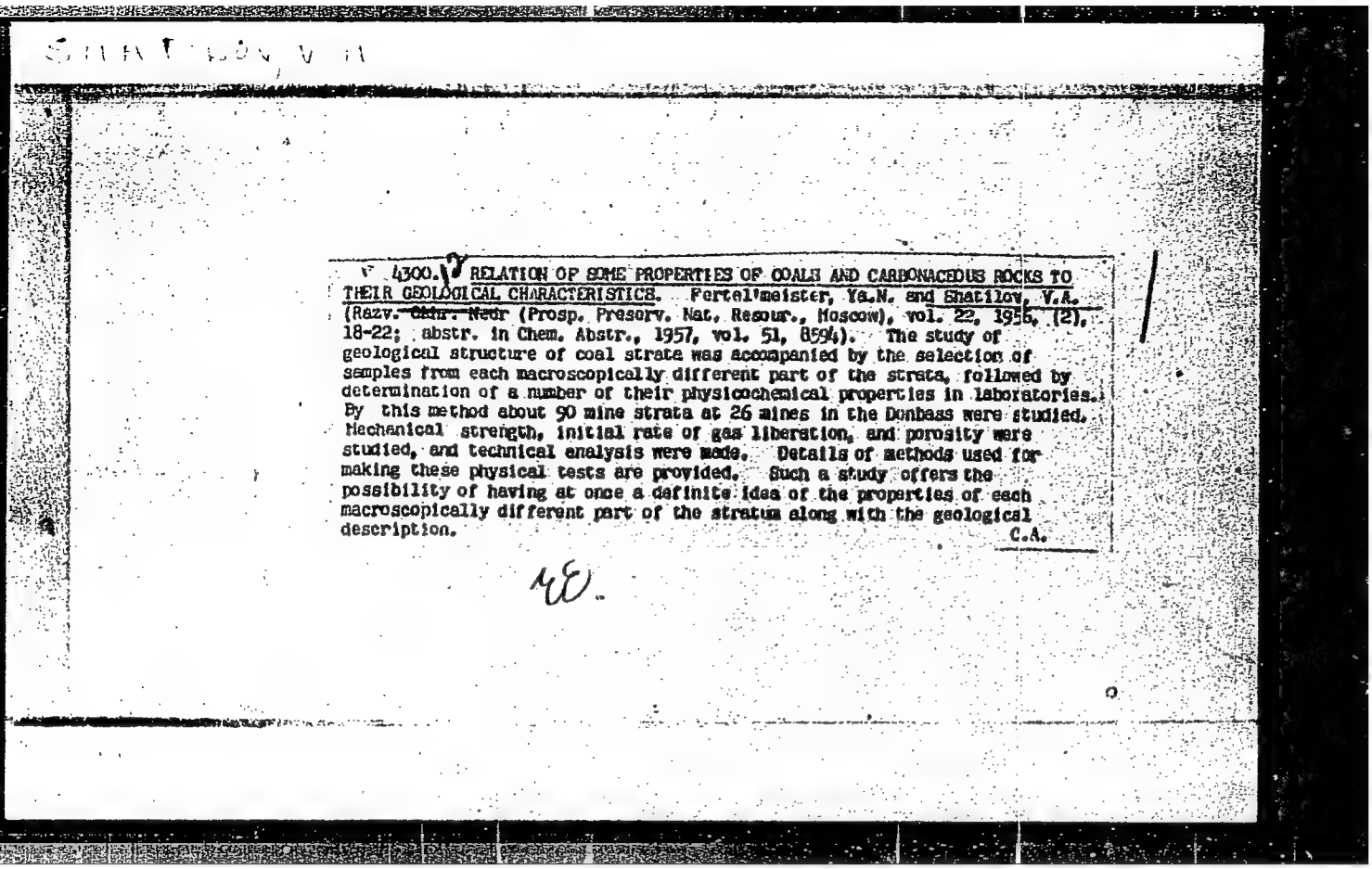
Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

BOBROV, I.V., starshiy nauchnyy sotrudnik; SHATILOV, V.A., starshiy nauchnyy sotrudnik.

Rock bursts during shaft sinking. Ugol' 30 no.11:28-32 N '55.

1.Makeyevskiy nauchno-issledovatel'skiy institut.
(Earth movements) (Shaft sinking)



SECTION VII

4300. RELATION OF SOME PROPERTIES OF COALS AND CARBONACEOUS ROCKS TO THEIR GEOLOGICAL CHARACTERISTICS. Fertel'meister, Ya.N. and Shatilov, V.A. (Razv. Okh. Nedr (Prosp. Preserv. Nat. Resour., Moscow), vol. 22, 1956, (2), 18-22; abstr. in Chem. Abstr., 1957, vol. 51, 8694). The study of geological structure of coal strata was accompanied by the selection of samples from each macroscopically different part of the strata, followed by determination of a number of their physicochemical properties in laboratories. By this method about 90 mine strata at 26 mines in the Donbass were studied. Mechanical strength, initial rate of gas liberation, and porosity were studied, and technical analysis were made. Details of methods used for making these physical tests are provided. Such a study offers the possibility of having at once a definite idea of the properties of each macroscopically different part of the stratum along with the geological description.

C.A.

48.

BOBROV, I.V., kandidat tekhnicheskikh nauk; SHATILOV, V.A., kandidat geologo-mineralogicheskikh nauk.

Sudden rock ejections during the sinking of vertical mine shafts in the Donets Basin. Bezop.truda v prom. 1 no.8:20-22 Ag '57. (MLRA 10:8)

1.Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.
(Donets Basin--Shaft sinking)

SHATILOV, V.A., kand.geol.-mineral.nauk; VOLOSHIN, N.Ye., gornyy inzh.

Results of studying the behavior of flat dipping outburst-dangerous seams in geological distrubances. Ugol' Ukr. 4 no.1:19-20 Ja '60. (MIRA 13:5)
(Coal geology)

SHATILOV, V.A., inzh.; POKHIL'CHENKO, I.M., inzh.

Using the drainage system for controlling sudden outbursts. Ugol' Ukr. 4 no.9:31-32 S '60. (MIRA 13:10)
(Coal mines and mining--Safety measures)
(Subsidences (Earth movements))

SHATILOV, V.A., kand.tekhn.nauk; ANDRIYENKO, V.I., inzh.; PANKOV, V.V., inzh.

Control of formation by means of preliminary moistening of the coal block. Ugol' Ukr. no.6:13-14 Je '60. (MIRA 13:7)

1. Luganskoye otdeleniye Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti gornykh rabot.
(Mine dusts)

SHAILOV, V.A.

Fueling tractors without a fuel man. Sbor. rab. GOSNITI no.17:69-71 '62. (MIRA 17:9)

MINKIN, I.I. (Rostov-na-Donu); SHATILOV, V.V., inzh. (Rostov-na-Donu)

Information and centralized freight delivery. Zhel. dor. transp. 47 no.5:35-36 My '65. (MIRA 18:6)

1. Nachal'nik Rostovskoy gorodskoy tovarnoy stantsii (for Minkin).

GORSHKOLEPOV, V.F., inzhener; B. DEL RIO, kandidat tekhnicheskikh nauk;
SHATILOV, V.V., inzhener.

Problem of determining the distance between freight container platforms in spacing them. Trudy RIIZHT no.20:60-70 '56.
(Railroads--Freight) (MLRA 9:10)

SHATILOV, V.V. (Rostov-na-Donu)

Method for speeding up the calculation of freight rates. Zhel.dor. transp. 37 no.5:78 My '56. (MLRA 9:8)

1. Nauchal'nik dorozhnoy kontory konteynernykh perevozok i transportno-ekspeditsionnykh operatsii Severo-Kavkazskoy dorogi.
(Railroads--Pro-rating tables)

SHATILOV, V.V., inzh. (Rostov-na-Donu)

Need for a new structure of the organization of loading and unloading operations. Zhel.dor.transp. 44 no.4:83 Ap '62.
(MIRA 15:4)

1. Zamestitel' nachal'nika gruzovoy sluzhby Severo-Kavkazskoy dorogi.
(Loading and unloading)

SHATILOV, Yu.S. (Moskva, poselok Lenina, Sudeyskiy pereulok 3-a)

Case of successful surgical treatment of a patient with tuberculous spondylitis complicated by tetraplegia. Ortop., travm.i protez. 24 no.9:43-44 S '63. (MIRA 17:4)

1. Iz kostnokhirurgicheskogo otdeleniya (zav. - prof. Ye.N.Stanislavleva) Instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir. - kand. med.nauk T.F.Mechalova, zamestitel' direktora po nauchnoy chasti - prof. D.D.Aseyev).